

Attorney's Docket No. 1027651-000288

Application No. 10/561,238

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AMENDMENTS TO THE CLAIMS

*This listing of claims will replace all prior versions and listings of claims in the application.*

LISTING OF CLAIMS:

1. (Currently Amended) Method of ventilating a device for electron beam irradiation of at least one side of a web, the device for electron beam irradiation being comprised of a first chamber and a second chamber, the second chamber extending inside the first chamber in separated relation to the first chamber, the first chamber comprising a web inlet opening and a web outlet opening, the second chamber comprising a web inlet opening, a web outlet opening, and an electron exit surface through which electrons are adapted to be emitted into the second chamber, the method comprising the steps of:  
~~providing a first chamber comprising a web inlet opening and a web outlet opening,~~  
~~providing a second chamber extending inside the first chamber, the second chamber comprising a web inlet opening, a web outlet opening, and an electron exit surface through which electrons are adapted to be emitted into the second chamber,~~  
passing the web through the second chamber, and  
creating a flow of a gaseous fluid through both the first and second chambers in a direction opposite the direction of travel of the web by supplying said fluid into the web outlet opening of the first chamber, and  
discharging the gaseous fluid in at least the second chamber through  
providing at least one discharge outlet.

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 3

2. (Currently Amended) Method of ventilating a device for electron beam irradiation of at least one side of a web, the device for electron beam irradiation being comprised of a first chamber and a second chamber, the second chamber extending inside the first chamber in separated relation to the first chamber, the first chamber comprising a web inlet opening and a web outlet opening, the second chamber comprising a web inlet opening, a web outlet opening, and an electron exit surface through which electrons are adapted to be emitted into the second chamber, the method comprising the steps of:

~~providing a first chamber comprising a web inlet opening and a web outlet opening,~~

~~providing a second chamber extending inside the first chamber, the second chamber comprising a web inlet opening, a web outlet opening, and an electron exit surface through which electrons are adapted to be emitted into the second chamber,~~

passing the web through the second chamber,

providing fluid connection between the web outlet opening of the second chamber and the web outlet opening of the first chamber,

preventing fluid connection between the first chamber and the web outlet opening of the first chamber, and

creating a flow of a gaseous fluid through both the first and second chambers in a direction opposite the direction of travel of the web by supplying said fluid into the first chamber and into the web outlet opening of the first chamber, and

discharging the gaseous fluid in at least the second chamber through

providing at least one discharge outlet.

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 4

3. (Currently Amended) The method according to claim 1, comprising fluidly connecting the step of providing fluid connection between the web inlet opening of the first chamber and both the first chamber and the web inlet opening of the second chamber.

4. (Currently Amended) The method according to claim 1, comprising fluidly connecting the step of providing fluid connection between the web outlet opening of the first chamber and both the first chamber and the web outlet opening of the second chamber.

5. (Currently Amended) The method according to claim 1, wherein comprising the step of locating the web outlet opening of the second chamber is located at a distance from and preferably substantially in line with the web outlet opening of the first chamber.

6. (Currently Amended) The method according to claim 1, wherein comprising the step of providing the discharge outlet is located in vicinity of the web inlet opening of the second chamber.

7. (Currently Amended) The method according to claim 1, wherein comprising the step of providing the discharge outlet is located inside the second chamber in the vicinity of the web inlet opening.

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 5

8. (Currently Amended) The method according to claim 1, wherein  
~~comprising the step of providing the~~ discharge outlet is located in the vicinity of the  
web inlet opening of the first chamber.

9. (Currently Amended) The method according to claim 1, comprising the  
~~step of~~ controlling the flow of gaseous fluid so that a first overpressure is created  
inside the first chamber, and a second overpressure is created inside the second  
chamber.

10. (Original) The method according to claim 9, whereby the overpressures  
are chosen so that the first overpressure and the second overpressure are the same.

11. (Original) The method according to claim 9, whereby the overpressures  
are chosen so that the first overpressure and the second overpressure are different.

12. (Currently Amended) Device for electron beam irradiation of at least  
one side of a web, the device comprising:

a first chamber comprising a web inlet opening and a web outlet opening,

a second chamber extending inside the first chamber in separated relation to  
the first chamber, the second chamber comprising a web inlet opening, a web outlet  
opening, and being adapted to receive an electron beam emitter provided with an  
electron exit window through which electrons are adapted to be emitted into the  
second chamber,

the web being adapted to pass the second chamber, and

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 6

the web outlet opening of the first chamber being adapted to be in communication with a gaseous fluid supply and both chambers being in communication with an outlet, the supply and the outlet are adapted to create a flow of the gaseous fluid through both the first and second chambers in a direction opposite the direction of travel of the web.

13. (Currently Amended) Device for electron beam irradiation of at least one side of a web, the device comprising:

a first chamber comprising a web inlet opening and a web outlet opening,

a second chamber extending inside the first chamber in separated relation to the first chamber, the second chamber comprising a web inlet opening, a web outlet opening and being adapted to receive an electron beam emitter provided with an electron exit window through which electrons are adapted to be emitted into the second chamber,

the web being adapted to pass the second chamber,

a fluid connection is adapted to be provided between the web outlet opening of the second chamber and the web outlet opening of the first chamber,

a fluid connection is adapted to be prevented between the first chamber and the web outlet opening of the first chamber,

the web outlet opening of the first chamber being adapted to be in communication with a first gaseous fluid supply.,

the first chamber being adapted to be in communication with a second gaseous fluid supply,

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 7

both chambers being in communication with [[an]] a discharge outlet through which is discharged the gaseous fluid from at least one of the first and second gaseous fluid supplies, and

the first and second supplies and the discharge outlet are adapted to create a flow of the gaseous fluid through both the first and second chambers in a direction opposite the direction of travel of the web.

14. (Currently Amended) Device for electron beam irradiation of at least one side of a web, the device comprising:

a first chamber comprising a web inlet opening and a web outlet opening,

a second chamber extending inside the first chamber in separated relation to the first chamber, the second chamber comprising a web inlet opening, a web outlet opening, and an electron beam emitter provided with an electron exit window through which electrons are to be emitted into the second chamber,

the web being adapted to pass through the second chamber, and

the web outlet opening of the first chamber is in communication with a gaseous fluid supply and both chambers are in communication with [[an]] a discharge outlet through which the gaseous fluid in the chambers is discharged, the supply and the discharge outlet are adapted to create a flow of the gaseous fluid through both the first and second chambers in a direction opposite the direction of travel of the web.

15. (Currently Amended) Device for electron beam irradiation of at least one side of a web, the device comprising:

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 8

a first chamber comprising a web inlet opening and a web outlet opening,  
a second chamber extending inside the first chamber in separated relation to the first chamber, the second chamber comprising a web inlet opening, a web outlet opening, and an electron beam emitter provided with an electron exit window through which electrons are emitted into the second chamber,  
the web being adapted to pass through the second chamber,  
a fluid connection is provided between the web outlet opening of the second chamber and the web outlet opening of the first chamber,  
the first chamber is prevented from being in fluid connection with the web outlet opening of the first chamber,  
the web outlet opening of the first chamber being in communication with a first gaseous fluid supply,  
the first chamber is in communication with a second gaseous fluid supply, both chambers being in communication with [[an]] a discharge outlet through which the gaseous fluid in the chambers is discharged, and  
the first and second supplies and the discharge outlet are adapted to create a flow of the gaseous fluid through both the first and second chambers in a direction opposite the direction of travel of the web.

16. (New) The method according to claim 1, wherein the first chamber through which the flow of the gaseous fluid is created is located inside an outer housing, and the second chamber through which the gaseous flow is created is located inside an inner housing which is separate from and positioned inside the

Attorney's Docket No. 1027651-000288  
Application No. 10/561,230  
Page 9

outer housing, the first chamber being between the outer housing and the inner housing.

17. (New) The device according to claim 12, wherein the first chamber is located inside an outer housing, and the second chamber is located inside an inner housing which is separate from and positioned inside the outer housing, the first chamber being between the outer housing and the inner housing.

18. (New) The device according to claim 13, wherein the first chamber is located inside an outer housing, and the second chamber is located inside an inner housing which is separate from and positioned inside the outer housing, the first chamber being between the outer housing and the inner housing.

19. (New) The device according to claim 14, wherein the first chamber is located inside an outer housing, and the second chamber is located inside an inner housing which is separate from and positioned inside the outer housing, the first chamber being between the outer housing and the inner housing.

20. (New) The device according to claim 15, wherein the first chamber is located inside an outer housing, and the second chamber is located inside an inner housing which is separate from and positioned inside the outer housing, the first chamber being between the outer housing and the inner housing.